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ABSTRACT

A combination of crises and innovative attempts to manage them that began in 1980 transformed the relationship between Xerox Corporation and the Amalgamated Clothing and Textile Workers Union, which represents most of Xerox's manufacturing employees. Eight pivotal episodes were largely responsible for the transformation. The first was a joint decision to establish a program of employee involvement in corporate decision making. The second event was the hard bargaining and joint decision making that began two years later in response to Xerox's decision to subcontract about 180 jobs. Next came the institutionalization of joint decision making, which was in turn followed by the plateauing of volunteers for the formal employee involvement process. The fifth critical episode was the gradual emergence of pockets of worker autonomy on the shop floor and the consequent accommodation on the part of the formal system of contractual rules and managerial procedures. After this came changing patterns of strategic decision making, resource allocation, and information sharing. A corporate-wide effort to transform the managerial culture was the seventh pivotal event. Finally, there were the 1986 negotiations that continued the corporation's no-layoff policy and the exploration of new forms of rewards and recognition. (MN)

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Tracing a Transformation in Industrial Relations

The Case of Xerox Corporation and the Amalgamated Clothing and Textile Workers Union

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Except where otherwise noted, the case is based on over one hundred interviews conducted during the last three years, archival analysis, and other sources of information at Xerox and ACTWU. The support and assistance of the employees, union officials, and managers at Xerox and ACTWU is deeply appreciated. This case was further enriched by input from the full research team associated with the DOL study – especially Thomas Kochan, who introduced me to the parties at Xerox and ACTWU and has contributed to the development of the research at every stage.

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I. Executive Summary

Beginning in 1980, a combination of crises and innovations have led to a transformation in the relationship between the Xerox Corporation and the Amalgamated Clothing and Textile Workers Union (ACTWU), which represents most Xerox manufacturing employees. On the shop floor and in strategic decision making, there have emerged a wide range of formal and informal forums for pursuing common interests that have evolved — sometimes painfully — so as to complement the traditional collective bargaining and contract enforcement activities. The parties did not begin with the goal of a transformed relationship, but the limitations of more narrowly focused collaborative efforts have led them to this succession of larger issues.

Eight critical or pivotal episodes are highlighted in the case, which is set in Xerox's home manufacturing complex in Webster, a suburb of Rochester, New York. It begins like the experience in so many other U.S. firms with a joint decision to establish a program on employee involvement (EI), motivated partly out of a commitment to the principle of participation and partly out of a hope that it will help address growing competition. The second pivotal episode came two years later, with the announcement of a decision to subcontract about 180 jobs. This was followed not by the demise of EI, but by hard bargaining and the application of the principle of joint decision making to this outsourcing situation — ultimately reversing management's initial decision. Third was the institutionalization, via collective bargaining, of joint decision making on all potential subcontracting issues along with the establishment of a "no layoff" guarantee. The plateauing of volunteers for the formal employee involvement process is considered fourth. This led to self-evaluation via a survey and, ultimately, to the development of an institutional arrangement that allows for multiple forms of employee participation. The fifth episode concerned the gradual emergence of pockets of worker autonomy on the shop floor and the consequent accommodation on the part of the formal system of contractual rules and managerial procedures — a process that continues today. Changing patterns of strategic decision making, resource allocation, and information sharing are considered sixth. These include extensive union and hourly worker involvement in human resource planning, new product development, and new plant design, as well as the implications of closer relations between Xerox and its supplier organizations. Seventh, is a corporate-wide effort to transform the managerial culture that is partly built on the Webster experience, but that has deep consequences for union-management relations. Finally, the 1986 negotiations marks a strengthening of the participative efforts with a continuation of the no layoff policy and the exploration of new forms of rewards and recognit[illegible] They also represent an affirmation of the centrality of co[illegible]tive bargaining as a forum for consideration of these issues, though it becomes clear that the very nature of bargaining has shifted in important ways.

Together, this sequence of events reveals the extent to which the parties' capacity to pursue common interests depended on their ability to resolve deep conflicts *and* the extent to which the parties' ability to resolve conflicts depended, in turn, on their collaborative experiences. By learning, over time, to attend to these interconnections, the parties have embarked down a path toward a transformed system of industrial relations — without requiring the construction of a new worksite or the hiring of a new work force. For theorists, the case is designed to trace new patterns of labor-management relations in enough detail so as to foster dialogue about the content and process of transformation in labor-management relations. For practitioners and policy makers, the new patterns offer some insight into the requirements for achieving competitive success while attending to critical issues of employment security and union independence.

II. Introduction

From 1976 to 1982, the Xerox Corporation's share of worldwide copier revenues dropped from 82 percent to 41 percent.[1] The company was facing unprecedented competition from corporations such as Canon, Ricoh, Kodak, IBM, 3M, Minolta, Oce, Savin, Konishiroku, Mita, Toshiba, Panasonic, Royal, and Pitney Bowes. This was a marketplace filled with firms renowned for their capabilities in sales, service, manufacturing, and product development. Meeting this challenge and regaining significant market share, which Xerox has done, has required dramatic change throughout a firm employing over 100,000 people.

Xerox's competitive resurgence has been well documented.[2] Public attention has particularly focused on the transformation of product development, sales, and service — involving, in each case, a return to the principles and dynamism that characterized Xerox's early years. Though less in the spotlight, similar changes in manufacturing are notable, in part, since they preceded and influenced changes elsewhere in the corporation. Moreover, since this portion of the Xerox Corporation is unionized, the experience in manufacturing speaks directly to the concerns of many other unions and managers facing similar economic and social pressures. For both reasons, it is the developments in manufacturing that will be the focus here.[3]

So many collaborative efforts in unionized settings have begun narrowly focused around employee involvement, only to be overwhelmed by contentious issues such as layoffs, disinvestment, and the lack of a sharing of the gains. A handful of unionized cases have so embraced the importance of cooperation, that they have gone to an extreme characteristic of some nonunion cooperative efforts, in which there is little room for internal dissent. This case illustrates the dynamics of a third alternative, which is an expansion and institutionalization of the collaborative effort in conjunction with a continued recognition of the legitimacy of conflict and the importance of the institutions of collective bargaining. The case is notable since it traces what might now be considered a transformed employment relationship in an established, unionized worksite — without the construction of a new facility or the recruitment of a new (presumably nonunion) work force.

Background

The bulk of U.S. manufacturing for Xerox is based in Webster, New York, which is near Rochester. This was the city in which Joseph C. Wilson, Sr., transformed the tiny Haloid Corporation into Xerox with the sale of the world's first plain paper copier in 1959. Wilson imprinted on the organization strong community and employee-oriented values.[4] He recognized, without resistance, the dominant union in Rochester — the Amalgamated Clothing and Textile Workers Union (ACTWU) — as the designated representative of Xerox employees. Today there are just under 4,000 bargaining unit members, though unionized employment has been as high as 7,000 and overall Rochester area employment has been over twice that.

The Webster site includes facilities for the final assembly of mid-size and high-volume photocopiers, the fabrication and assembly of various copier components, the production of related products (such as toner, a black talc-like substance used in copying), and product distribution. There are some research and development operations in Webster which are linked to activities in a major Xerox engineering center about 20 miles from Webster.

As one of the largest and highest-wage employers in the Rochester area, Xerox has a relatively stable, high-seniority work force. Within the union leadership, there has also been a high degree of stability over the years. Within the top ranks of manufacturing management, however, there has been a high degree of job movement. As we will see, the consequences of this movement are more acutely felt during a time when the patterns of labor-management relations are in transition.

Relations between the company and union were relatively peaceful during the 1960s and the 1970s, although there was one major strike and occasional unofficial job actions. During this period, the relationship was typical of many unionized U.S. employment relationships in the centrality accorded to the negotiation and administration of bargaining agreements.

The Point of Departure

This case study begins in 1980, a time when these traditional forms of dispute resolution — collective bargaining and the grievance procedure — were well developed between Xerox and ACTWU. The parties' capacity to identify and pursue common concerns, however, was limited to informal arrangements on the shop floor and regular, but informal, briefings by top management with union leaders. The case traces the development of this capacity to pursue common

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[1]Xerox includes the parent Xerox Corporation (The Haloid Company was founded in 1906, became Haloid Xerox, Inc., in 1958, and the Xerox Corporation in 1961); Rank Xerox Limited (A 50-50 partnership with the Rank Organization Limited in the United Kingdom that was created in 1956; in 1969 Xerox bought an additional share, giving it majority ownership); and Fuji Xerox Company, Limited (A 50-50 partnership created in 1962 between Rank Xerox and Fuji Photo Film of Japan).

[2]Gary Jacobson and John Hillkirk, Xerox: *American Samurai*, New York: Macmillan Publishing Company, 1986.

[3]The larger set of corporate changes, while certainly of interest, is well beyond the scope of this case. Developments in other parts of Xerox will be noted only to the extent that they directly influence or derive from changing patterns of labor-management relations in manufacturing. Issues of diffusion within manufacturing, will, however, receive direct attention at a number of points in the case.

[4]By all accounts, Wilson strove to manage Xerox and live his life consistent with the following statement, which was found on a frayed blue index card in his wallet after he passed away: "To be a whole man, to attain serenity through the creation of a family life of uncommon richness; through leadership of a business which brings happiness to its workers, serves well its customers and brings prosperity to its owners, by aiding a society threatened by fratricidal division to gain unity." (Jacobson and Hillkirk, *op. cit.*).

concerns, without the abandonment of traditional collective bargaining responsibilities.

It has not been, in any sense, a smooth or natural evolution. Rather, the period from 1980 to the present has been punctuated by a series of doubled-edged crises that carried the potential either to undercut or to reinforce the new patterns of labor-management relations. These are referred to in the case as "choice points" or "pivotal events," and they represent more than an analytical device. Not only are the interests of labor and management more vivid at these points, but their very existence suggests a change process that is long-term, characterized by extensive formal and informal negotiations, and marked by a succession of discrete shifts in labor-management relations.

The choice points are presented in the case in roughly chronological order. However, some sections follow the consequences of choices up to the present (in order to clarify their implications) before returning back in time to the beginning of the next section. Today, as we will see, there is a clear pattern suggesting that these parties are on a path toward a transformed industrial relations system. But it will also become clear that there are pivotal events still to come for the parties. While it is hard to predict the outcomes of these future events, we can be quite confident in expecting that pivotal events will continue to occur — thus ensuring that one feature of a transformed labor-management relationship involves continued difficult choices about the direction of the relationship.

III. The First Step: Employee Involvement

When local 14A of ACTWU and Xerox entered into collective bargaining negotiations in 1980, the company had already begun to experience shrinking market share but had not shifted its business strategy in response. Though similar in most respects to previous negotiations, the parties did agree to experiment with what was then termed a quality-of-work-life (QWL) effort. The focus was on creating shop-floor problem-solving groups comparable to quality circles. Oversight would be handled jointly through union-management plant advisory committees (PACs) in each of the four main manufacturing plants in the Webster complex, along with a network of department-level steering committees. Union and company officials each designated "trainer/coordinators" who received extensive training in facilitating the work of the problem-solving groups (PSGs). Membership on a PSG was voluntary and accompanied by about 40 hours of training in problem solving, statistical methods, and group dynamics.

The QWL proposal was made by management and, initially, drew skepticism from the union. They agreed to proceed only after assurances that oversight would indeed be joint, that management saw QWL as something more than a short-lived program, and that QWL would be kept separate from the management structure, the union structure, and the collective bargaining relationship. Thus, the different levels of joint committees and PSGs were intended to function as a separate (but parallel) structure. As well, the language of collective bargaining was employed to explicitly designate issues that were "permissible" for discussion in PSGs and issues that were "off limits." These distinctions were as follows:[5]

Off-Limits Areas

Salaries, union grievances, union contract, benefits, company policy, working hours, rates, breaks, classification, overtime, personalities, payroll, discipline, problems shop chairmen are working on, production standards.

Permissible Areas

Product quality; work environment safety; savings in material and inventory costs; improvements in process, methods, or systems; improvements in facilities, tools, or equipment; reduction in paperwork; elimination of waste of materials and supplies; quality; scrap; rework; locations of equipment/materials.

A further guarantee was provided by management in the form of a letter stating that no employees would lose their jobs due to productivity gains generated by QWL teams.

The reception to this initiative from first-line supervisors and from union stewards was mixed. Some were openly hostile, some were highly receptive, and most were skeptical that it would have anything more than the short-term, limited impact of previous employee-oriented programs. However, few questioned what was seen as the importance of keeping QWL distinct from collective bargaining and from the internal operations of the company and the union.

Within the first year and a half, over 90 problem-solving groups were established in the four main plants. After two years, about 25 percent of the 4,000 employees in the bargaining unit had volunteered for QWL training and participated in a problem-solving group. By two-and-a-half years, the collaborative efforts had spread throughout the four manufacturing plants and into other facilities in the Webster complex, accounting for a total of over 150 problem-solving groups.

The range of problems successfully solved by these groups included: improving the quality of manufactured parts, developing training for new technology, eliminating chemical fumes, reducing paperwork, machine upgrading, reducing downtime, eliminating oil spills, organizing tool storage, improving communications across departments, developing orientation for new employees, and redesigning floor layout to be more efficient. About 20 percent of the successful proposals included estimates of cost savings, which totaled close to a half a million dollars.[6]

Early Barriers to QWL

Despite the successful problem-solving experiences, there were clear limitations on the QWL effort. Some of the barriers derived from the traditional structure of collective bargaining and labor-management relations. For example, as a result of the extensive bumping and bidding rights guaranteed by the contract, there was high turnover in many of the groups. These job moves occurred almost every two months. Layoffs of over 5,000 Rochester area employees during 1981 and 1982 — approximately 1,200 of whom were union members — brought additional turnover on the teams. Moreover, while the layoffs were an accepted part of a traditional collective bargaining relationship, they directly undercut attempts to emphasize the commonality of interests between labor and management.

Some of the barriers derived from the QWL process itself. For example, there was dissatisfaction with the time required to solve major problems and, more frequently, dissatisfaction with the time required to implement the solutions. During the three years, the average time required just to generate a solution to a problem was between three and four months. A handful of problems took a year or more before they were proposed for implementation.[7] These

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[5]These lists are from Peter Lazes and Tony Costanzo, "Xerox Cuts Costs Without Layoffs Through Union-Management Collaboration," Washington, D.C.: U.S. Department of Labor, 1984.

[6]Data tracing actual cost savings on all the suggestions after implementation is not available. Overall performance data is discussed at the end of the case, which indicates at least a correlation between improved performance and the changes in labor-management relations.

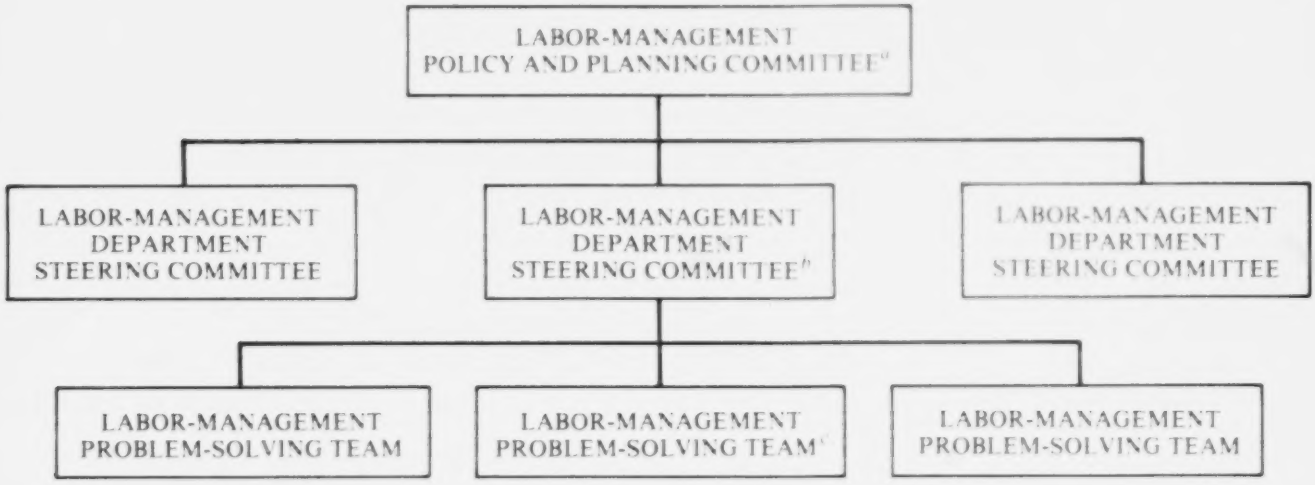
[7]In fact, this experience is quite consistent with the time period required for problem solving in other locations studied in the course of the larger U.S. Department of Labor Study, of which this case is a part. This issue, however, is that the workers' expectations were apparently for a much speedier process.

perceived delays reflected, in part, workers tackling problems not amenable to quick solutions, but they also reflected the need to develop procedures (and overcome internal politics) associated with workers being given access to people and information not previously available to them.

The constraints on the QWL effort — seniority job movement, layoffs, and delays — involved issues that were either at the core of the collective bargaining contract or that directly involved issues traditionally considered managerial rights. Addressing these barriers was well beyond the scope of QWL, which was intended to serve as an adjunct to bargaining. The barriers were choice points in which the choice was made in favor of the status quo. Yet, in the second year of the QWL efforts, a crisis led to direct union and management consideration of all these core issues. The initial QWL structure is depicted below:[b]

[b] Chart from Lazes and Costanza, *op. cit.*

Initial Labor-Management Monitoring and Support Structure for Problem-Solving Teams



[a] Composition of Policy & Planning Committee

- plant manager
- elected union officials
- general foreman
- engineers, quality control and financial staff
- representatives of hourly employees

[b] Composition of Steering Committee

- general foreman
- department-elected union official
- department technical specialist
- representative hourly employees

[c] Composition of Problem-Solving Teams

- foreman
- hourly employees

IV. Extending the Principle of Joint Decision Making

Early in 1983, the union learned that management was in the process of vending out certain work in the sheet metal area of the Components Manufacturing plant. Originally, it had been both parties' intention to keep QWL separate from the adversarial side of the labor-management relationship. However, the potential loss of jobs was so divisive an issue that the union informed management that it could not continue to cooperate on the joint QWL effort, on the one hand, and yet see work vended out without joint consideration, on the other hand. Thus, the union's threat to pull out of the QWL effort was a pivotal event.

If QWL was to persist as a joint effort, the union in effect was demanding that the principles of joint decision making would have to extend to other aspects of the employment relationship. In response, management agreed to halt the subcontracting in the Sheet Metal area. Further, there was an understanding that future decisions on subcontracting would not take place on a unilateral basis.[9] That this first challenge to the cooperative efforts emerged in the components portion of the manufacturing organization should come as no surprise since this is the portion of the business most subject to external market pressures and hence most likely to encounter conflicts of interest.

The Wire Harness Study Team

The first test of the new understanding around subcontracting also arose in the components plant in October 1981. At that time the company announced the possibility of a $3.2 million savings from subcontracting the assembly of wire harnesses used in Xerox machines. This raised the specter of an entire department — around 180 people — being laid off. Not only would this have been devastating for the individuals involved, but the handling of this issue would now have clear consequences for the joint QWL efforts. Tony Costanza, now an International Vice President and Director of ACTWU, was Chief Shop Steward at the time. He recalls that this was an issue clearly outside the purview of QWL, yet it so deeply affected the quality of so many people's work lives that any unilateral decision would have been inconsistent with the principle of joint decision making around QWL issues.

A series of top-level union-management meetings led to management's suspending outsourcing plans for the wire harness area pending the establishment of a joint Study Team to be composed of six workers from the affected area, an engineer, and a manager. In essence, the parties saw themselves as applying the QWL problem-solving model to a new set of issues. Many in management privately protested the establishment of a Study Team, feeling that all reasonable possibilities for saving the work had been investigated. Nevertheless, six months was allowed for a team to fulfill the following mission:

> Find ways to be competitive, improve quality, cost, and delivery performance of the business to levels which will assure a positive competitive position and, ultimately, to secure jobs.

Over 180 hourly employees volunteered for the team — practically all the employees in the affected area of the plant. The union shop chairmen and top union officers made the selection. Management picked the engineer and manager who were to serve on the team, and both sides conferred to assure that the final work group would be compatible.

The Study Team's task would not be easy. Xerox had recently established a competitive benchmarking program so as to evaluate its operations and products against the competition along the following dimensions: customer satisfaction, product reliability, design effectiveness, service cost, installation quality, and manufacturing cost.[10] Over $3 million in savings had to be achieved while meeting all of the benchmarks that had been set.

At the outset, the team was trained in group problem-solving skills, communications techniques, and Xerox's accounting and financial methods. They were given office space, telephones, and a promise of complete access to anyone in the corporation. A plant labor-management Steering Committee, with its own executive committee, was established to meet regularly with the team in the expectation that some of the team's work would need approval beyond the authority of the plant and divisional union and management officials.

Initially, it was not only the scope of their task that frustrated the team. The rest of the management organization was not prepared to deal with such a group. Financial information was not always available when it was needed. Policy decisions had to be made about access to confidential information, such as supervisors' salaries. At times, projects or progress were as undermined by operations managers or general supervisors who "took independent action to implement the changes before the team had presented its ideas to appropriate managers or union officials."[11] Peter Lazes, an external consultant to the QWL initiatives, assisted the Study Team in surfacing these issues, channelling support from top labor and management leaders, and in sorting out the internal frictions that initially emerged between hourly and salaried team members. The Study Team also succeeded in building the trust of other hourly workers through a request for suggestions (over 200 suggestions were generated) and via weekly "walkaround" visits within all parts of the department.

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[9] Legally, of course, the union could only insist on its right to bargain over the effects of such a decision, not over the decision itself.

[10] This competitive benchmarking represented one of the most significant early responses of Xerox to increasing world competition. For some operations, parts, and products, Xerox has concluded that its own work represents the world benchmark; in other cases, the benchmark is held by one of Xerox's competitors; and, sometimes, the benchmark is in an unrelated industry. For example, after studying automated warehouse procedures in a variety of firms, Xerox identified the L.L. Bean mail-order company as the benchmark in this area.

[11] Lazes and Costanza, *op. cit.*

At the conclusion of six months of study, the team proposed changes ranging from physically redesigning the department, to expanding employee responsibilities, to upgrading equipment, to changing the calculation of certain overhead expenses. The biggest concentration of anticipated savings (over 38 percent) involved changes in the organizational structure and procedures, such as limiting job movement, redesigning work procedures, and consolidating jobs. In all, the estimated value of the savings significantly exceeded the team's target of $3.2 million.

Some of the proposals, however, were directly contrary to provisions in the collective bargaining agreement. For example, the reduction of job movement directly contravened the seniority bumping and bidding rights specified in the contract. (At the time, these contractual provisions might account for as many as two or three job changes a year for a low-seniority worker.) As well, the team recommended a reduction in ten minutes in the personal fatigue and delay allowance. Changes in the organization of work required changes in contractual work rules regarding lines of demarkation. Further, proposed reductions in the amount of supervision and in the calculation of overhead went directly to issues usually considered in the province of management rights. After considerable discussion, the parties agreed to implement the suggestions that involved no contractual changes, keep the outsourcing decision on hold, and grapple with the balance of the issues in the upcoming 1983 negotiations.

Future Instances of Subcontracting

Placing the Study Team issues on the bargaining table was a pivotal decision. It suggests that broadening the concept of joint decision making could not occur without having implications for other aspects of the relationship — especially collective bargaining. During the 1983 negotiations (which will be discussed in more detail in the next section of the case), the parties agreed to implement the remaining recommendations (concurrent with a three-year guarantee of no layoffs for those ACTWU employees in Webster on the March 1983 payroll). Moreover, the parties agreed to institutionalize the Study Team concept by stating that subcontracting decisions would have to be subject to the establishment of such a team.

In the years since 1983, four additional Study Teams have completed similar analyses. In addition to the Wire Harness Study Team, these teams have been in the following areas: turnings, castings, extrusions, and sheet metal. In four out of the five efforts, the recommendations have led to the continued in-house operation of these activities (rather than the anticipated subcontracting). The results have been enthusiastically received by labor and management at all levels. One senior executive stated:

> The task forces are the ultimate. With circles, it's hard to have religion every day. But here there is a crisis driving the effort. These groups have made changes that would have been impossible for me to achieve on my own as a manager. They've come up with ways for 120 people to do the work of 200, and we've provided other work for the remaining 80.

The experience with the Study Teams reveals that in order for this collaboration to effectively contribute to the goals of the employees and the employer, it was preceded, first, by a conflict that could not be resolved without some degree of hard bargaining. In essence, the union had to establish its legitimacy in this domain — which involved some contention — and then it was possible for collaboration to occur. The union, which initially sought to keep participative activities entirely distinct from collective bargaining, now highly values this expansion of the principle of joint decision making and the consequent ability to better represent its members regarding these critical issues.

The targeted, crisis-driven nature of the Study Team concept — while clearly a key to its successes — is also a source of some new problems in the organization. For example, one top union official voiced the following concern:

> We've never found a way to bring Study Team members back to the floor effectively. Some say "thank God" when it's all done because the pressure is off, but others would like to continue to use the skills they've developed. They are called on informally, but we should be able to do something more.

A related but much deeper issue also arises from the short-term nature of the Study Teams. This was vividly illustrated recently when it was announced that the wire harness area, the site of the first Study Team, was again noncompetitive. The result was the establishment of a second Study Team. In reflecting on this development, one hourly member of both the original team and the new team pointed out that "a continuously moving target requires far more monitoring than we have been doing." Further, the appointment of the new team quickly highlighted the fact that some of the original Study Team recommendations had not been implemented. There was thus a practical question as to whether the new team could claim potential cost savings from unimplemented earlier suggestions (it was decided that it could) and a more fundamental question about the location of accountability for the implementation of Study Team recommendations.

The outcome of this newest Study Team's research is not yet clear. The experience suggests, however, the importance of linking this sort of targeted assessment and broad scanning on competitive trends back into daily operations. Before tracing some of the links that are indeed occurring in business operations, it will be helpful to return to 1983 and review the parties' negotiation of a critical collective bargaining agreement.

V. Pivotal Negotiations

The institutionalization of the Study Team concept in the 1983 contract between Xerox and ACTWU was but one example of a larger, two-way linkage between the participatory efforts and the system of rules and regulations established via collective bargaining. Another equally important example of a participative issue that has bumped up into the collective bargaining forum was the company's agreement in 1983 to a moratorium on layoffs of ACTWU members in Webster for the full three-year term of the contract. This provision was, in part, a *quid pro quo* for other changes in the contract that are discussed below. However, it had clear implications for the participative effort. It addressed a concern not just of the employees associated with the Wire Harness Study Team or QWL groups, but of all employees at a time when workers were exploring improvements in organizational operations. No one wanted to be associated with suggestions that might cost them or coworkers their jobs, and this agreement served to minimize potentially divisive internal debate over such issues.

Once the decision was made in collective bargaining, however, its administration was different in many ways from the administration of other parts of the agreement. It has required a continuous and sophisticated level of human resource planning. As will be discussed below, this includes an equal role for the union on a Horizon Team established to do strategic planning around these same human resource issues.

Not all of the consequences of the 1983 negotiations served to reinforce and extend the collaborative activities. Three portions of the agreement had the opposite effect. The contract had no wage increase in the first year, it included changes regarding co-pay provisions for health benefits, and contained a highly restrictive no-fault absenteeism program. The health benefits changes and the one-year wage freeze were seen as concessionary and hence resented. The absenteeism control program was addressed at what was seen as overly high absentee rates. Beyond a set of contractually guaranteed reasons for not being at work (vacations, jury duty, holidays, etcetera), employees were only permitted a limited number of instances during which they were absent from work — regardless of the reason. While absenteeism subsequently dropped, an unintended consequence was that it put employees with good records at substantially greater risk than they otherwise would have been in the event of illness or other events beyond their control. As such, it was seen as contrary to the union and management emphasis on participation.

Following the agreement, there was not only an increase in grievances (reflecting dissatisfaction with portions of the settlement), but there was a decline in volunteers for the QWL problem-solving groups and a disbanding of some existing groups. Thus, the 1983 negotiations illustrate the double-edged capacity for collective bargaining to both reinforce and undercut collaborative activities. The potentially negative impact of collective bargaining on collaborative activities was even more acutely felt in the case of a small local of the International Union of Operating Engineers (IUOE), which represents some engineers at the Webster location.

The contract for the IUOE was similar to the ACTWU contract, with two critical exceptions. It did not include the no-layoff guarantee, and it did not include the subcontracting language, both of which had emerged out of the collaborative experiences between ACTWU and Xerox. Without these reinforcing features, the negative features of this agreement became particularly salient to the IUOE. In protest, the union filed an unfair labor practice charge claiming improper company actions regarding the co-pay change in health benefits. At the same time, it felt that it could not continue to endorse its members' participation in QWL activities and so withdrew from any formal role in this process. Ultimately, the unfair labor practice charge was dismissed, but this reveals how polarizing a lack of reinforcement via collective bargaining can be.

The event also provides some insight into the limitations of using withdrawal from QWL as leverage on other issues. Unlike ACTWU's experience in the case of the sheet metal area, the IUOE action split the union. Apparently, for the IUOE members who were involved in QWL groups, this form of participation was more important than their dissatisfaction with the health benefit changes. Employees not involved in the QWL process felt otherwise. This experience suggests that the threat of withdrawal from collaborative activities can only be used by a union in a limited number of cases where the issue is either of overarching importance to most members or where the issue clearly involves an inconsistency with the norms and values associated with the collaboration.

During the term of the agreement, the parties made informal modifications in the operation of the absenteeism control program and, as we will see later, formally addressed what were seen as the harshest aspects of the program in their 1986 negotiations. The informal changes alone, however, did not stem the decline in volunteers for QWL or the disbanding of additional groups. As such, this plateau and decline in participative activity represents that next major episode in the unfolding of this labor-management relationship.

VI. Responses to a Plateau in QWL Activity

Beginning in 1982, the number of new volunteers for QWL training and for membership in a problem-solving group began to decline. This was partly a reflection of dissatisfaction with the delays associated with the QWL process. As well, however, the decline in volunteers can be traced to the disruption and resentment associated with a series of layoffs in that year. While it would be expected that the no-layoff guarantees for ACTWU employees in Webster would have addressed this issue, the impact of the agreement was, in fact, mixed.

Interviews with employees who were involved in the QWL effort at that time suggest that these employees saw the no-layoff guarantee and the language on Study Teams and subcontracting as direct reinforcements of their QWL activities. They viewed the contract as a step in the right direction. However, there was no rush of new employees to become involved in the participative activities. Apparently, some of these employees stayed out of the process in protest over the changes in the health benefits and the new absenteeism control program. As one union official noted, "participation in QWL was one of the few things people had control over, so they used it to protest their feelings on other issues." As well, there was still skepticism or disagreement with the idea of QWL.

Since the top leadership of the company and the union had, by this time, come to value the participative efforts, discussions began over how best to address the decline. It was felt that part of the problem was a lack of understanding of the nature of QWL, so a decision was reached to make QWL training mandatory for all employees. In fact, the impact of this decision was exactly the reverse of what was expected. Rather than building a shared understanding of (and, it was hoped, a shared commitment to) QWL, the shift to mandatory training polarized the work force. Some individuals did come to value the participative activities as a result of the training, but many more were only at the sessions physically — they were not there in spirit. Indeed, some of these individuals were highly disruptive at these sessions.

This polarization was deeply felt in the QWL groups. During interviews with two such groups at this time, the group members were asked to identify what they had experienced as the principle forces that were barriers to their effective functioning. The perception of these groups was remarkably similar even though the groups were of different composition (one was composed of almost all white males, the other was highly heterogeneous); they had different work responsibilities (one involved skilled trades employees and the other involved employees that engaged in assembly and materials-handling work); and they had been in existence for different periods of time (one for less than a year and the other for almost four years). Among the many barriers independently identified by the groups, the five voted as most important by each group are listed below — indicating a common concern with issues related to a polarization in the work force.

Skilled Trades Group:

- Politics (with engineering, other workers on the floor, and management).
- Misunderstandings of QWL by those not on the team (including the perception that it's cutting jobs) and the resulting peer pressure.
- Communications (people outside the group not delving into ideas sufficiently).
- Insufficient support from people with specific, needed abilities.
- Not enough time (for problem solving).

Production and Materials Handing Group:

- Not enough cooperation from white-collar workers — passing the buck.
- Recent union contract stops people from getting involved.
- Not enough cooperation from other hourlies.
- Employee distrust and indifference (about QWL).
- Lack of dynamic leadership in the team.

Further discussions with these and other employees highlighted the very real danger of a growing split in the work force. Of critical importance was the extent to which this split reflected disagreement over QWL per se, or dissatisfaction over other issues being expressed in the context of QWL. In order to examine these and related issues, the company and the union worked with a consultant to design an employee questionnaire.[12]

An Attitude Survey

The attitude survey was administered in March of 1984 in the Components Manufacturing Operations, which employs about 1,000 hourly and salaried workers in Webster. The survey confirmed that employee attitudes about QWL were sharply divided. Employees involved in the process saw it as helping them, improving productivity, strengthening the union, contributing to improved labor-management relations, and functioning effectively as a process. Employees who had no interest in joining teams (regardless of whether or not they were previously on teams) had negative views along these and other dimensions. A small number of employees were not members of QWL groups, but indicated an interest in joining these groups and basically shared the views of current groups members.[13] The general results are illustrated on the following page:

[12]The attitude survey was constructed and administered by Larry Pace, Manager for Organizational Effectiveness in Reprographics Manufacturing at Xerox, and Ron Mitchell, an internal consultant to Xerox's manufacturing operations.

[13]The similarity of views suggests, but does not demonstrate, that some attitudes about QWL may be independent of actual experience with QWL — an issue with far-reaching implications.

Table 1
1984 Perceptions of Quality of Work Life by CMO Employees, Based on QWL Experience and Interest in Future Involvement

	Not Involved and Not Interested in Joining (n=497)	Not Involved, But Interested in Joining (n=103)	Involved as a member of a QWL/EI group (n=175)
ATTITUDE MEASURES			
QWL is on the right path	3.0*	4.0	4.0
(5-item scale, alpha=.77)	(1.0)	(0.9)	(0.9)
QWL has contributed positively to:			
My morale, say, and work	2.5*	3.6	3.8
(3-item scale, alpha=.85)	(1.2)	(1.0)	(1.3)
Attachment to my job and the firm	2.5*	3.7	3.6
(3-item scale, alpha=.81)	(1.2)	(1.0)	(1.3)
Firm productivity and efficiency	2.9*	4.1	3.9
(3-item scale, alpha=.84)	(1.3)	(0.9)	(1.2)
In general to the union	3.2*	4.0	4.1
(single item)	(1.6)	(1.2)	(1.5)
Labor-management relations	2.7*	3.7	3.7
(4-item scale, alpha=.85)	(1.2)	(1.0)	(1.1)
Management supports QWL	3.7	3.8	3.9
(3-item scale, alpha=.64)	(0.9)	(0.9)	(0.7)
The union supports QWL	3.6	3.9	4.0
(2-item scale, alpha=.67)	(1.3)	(1.2)	(1.4)
Coworkers support QWL	2.3*	3.2*	2.7
(3-item scale, alpha=.70)	(1.1)	(1.0)	(1.1)

NOTE: All mean responses are in relation to a six-point scale where 1=disagree strongly; 3=disagree somewhat; 4=agree somewhat; and 6=agree strongly (2 and 5 were unlabeled). Standard Deviations are in parentheses. Where the attitude measures are constructed from multiple items on the questionnaire, the reliability alpha of the combined scale is included.

*Indicates that the difference between the mean response of these "not involved and not interested employees" is significantly different from the response of *both* of the other two group at the .01 level based on a three-way scheffe test. In all but one instance, there is not a significant difference between the interested employees and the involved employees. That one item is the last one regarding coworker support and that is marked with an asterisk as well.

The gap in attitudes was reflected in many other dimensions of the survey, all of which served to corroborate the parties' sense that there was a relatively large number of employees who were not involved in the QWL process, had no interest in being involved, and had negative views of the process. Indeed, this is reinforced by the fact that both employees with no interest in QWL and employees involved in QWL have negative perceptions of coworkers' support for QWL. However, embedded within the survey, there were a set of responses that went on to point the way for a fundamental change in the nature of QWL.

Specifically, there was overwhelming concurrence by the employees with statements concerning whether or not they wanted more say in their work (82.9 percent said they did), more information (86.0 percent said they did), and whether they liked the idea of employee involvement (89.8 percent said they did). This is consistent with the findings of recent national surveys on these issues.[14] Essentially, the employees were saying they valued participative principles, but that they did not all value QWL, as the vehicle for this participation.

The Business Area Work Group Structure

In response to the survey, the parties developed a new structure for participation in this components plant. They identified over 30 functional groupings of workers, each of which was designated as a Business Area Work Group (BAWG). It was decided that supervisors would be appointed as BAWG leaders and that bi-weekly meetings for the purpose of sharing information would be mandatory for all workers. The membership of the BAWG included the engineers, supervisors, and union officials associated with a given area. Beyond this relatively modest baseline level of participation, BAWG members would have the option to continue any QWL problem-solving groups, to form *ad hoc* groups to address specific problems, to serve as "individual

[14]See, for example, Alper, S. William, Bruce N. Pfau, and David Sirota, "The 1985 National Survey of Employee Attitudes: Executive Report," New York, NY: *Business Week* & *Sirota and Alper Associates*, 1985.

contributors," and/or to establish themselves as an autonomous work group.

The BAWG concept can be thought of as a contingent approach to participation. It is a structure that reflects the fact that participation means different things to different people. It has the advantages of being more tightly linked into the management structure and allowing for multiple forms of participation. It also carries the potential for moderating the tensions around "in-groups" and "out-groups."

The first BAWGs went into operation in the spring of 1985. With their creation, the term QWL has become less common. Employee involvement (EI) is now the generic term. Although the BAWG structure allows for multiple forms of employee involvement, it is important to note that it was not designed to replace the grievance procedure or to otherwise serve as a formal vehicle for dispute resolution. Although, as we will see below, the administration of the grievance procedure has become more informal, its existence is clearly a necessary complement to the BAWG activities.

A reflection of the merits of the BAWG concept is the diffusion of similarly flexible structures to at least two other plants in the Webster complex. In fact, in one plant — the New Build Organization (NBO) — the development of a parallel concept called "work families" was preceded by an intermediate shift away from QWL. In this plant, which is where new copiers are assembled, the number of problem-solving groups meeting on a weekly basis declined in 1984 from 24 to eight. While initially viewed with alarm by the QWL facilitators, it quickly became clear that "sunrise meetings" involving over half of the workers in the plant had been substituted in their place. During these meetings, supervisors and their work groups reviewed recent data on performance, quality, and materials. Given this experience, it is clear that NBO's version of the Business Area Work Group concept was an extension of participative principles, not a reversal.

As to the operation of the BAWGs, the individuals most closely associated with this organizational change point out that the designation of supervisors as group leaders had a mixed impact. Where the supervisor was supportive of participative efforts, the additional BAWG role was seen as complementary. Those supervisors who were less supportive, however, resented this new responsibility. As well, some supervisors and employees saw the imposition of a leader as inconsistent with the idea of participation. For these reasons and because many groups had hourly members who were strong informal leaders, it was recently decided that the BAWGs could elect their own leader. About half have switched from having a supervisor to having an hourly employee in this facilitating role.

While a separate analysis is being conducted to more precisely assess the impact of the shift to the BAWG structure, three patterns or implications seem clear. First, without the change in structure, it is likely that the QWL effort would not have progressed substantially beyond its plateau. Indeed, a distributive issue might have undercut those efforts. Second, the contributions of the BAWGs to economic performance, employee concerns, and the union's institutional security seem largely positive, but modest and highly variable across work areas, perhaps reflecting what is still an incomplete institutionalization of participative principles into organizational operations. Third, this incomplete integration may suggest that the BAWG structure will reach its own plateau. Interestingly, within this structure, we see the elements of a deeper integration between participation and work operations, along with a concurrent increase in patterns of autonomy. This is the focus of the next section.

VII. Transportation in the Organization of Work

With neither advance planning nor fanfare, a handful of work groups at Xerox have been functioning for over five years as semi-autonomous work groups — long before the advent of the Business Area Work Group concept. This form of work organization, in which work groups operate without direct supervision, typically emerged in selected areas where workers were used to operating independently and a supervisor either had retired or was overextended.

The first such group was established in the Components Manufacturing Organization in 1982 under a proviso from the plant manager that 1) all work would be completed on time, and 2) that there would be no defects. Twelve people were in the initial group, which split a year later into two groups due to product changes. Over the last six years, these two groups have fulfilled their initial commitment to the plant manager. In this, an area that reportedly had a reputation for poor quality, these groups have managed for over four years to complete their complex subassembly routines without a single defect reported from the field.

While there have been a number of studies of such semi-autonomous work groups in new manufacturing facilities, little has been written about the emergence of such groups in established facilities. As such, it will be instructive to review the way these groups allocate work, handle membership, conduct training, and interact with both the union and management.

Autonomous Work Group Operations

In describing the functioning of one of the groups, a member observed:

> It used to be that you were assigned to a job and that was it. Now we get together as a group and decide which jobs should be run, and how they should be run. Also, we do our own inspection and our own material handling. The people at quality assurance and material handling are not crazy about this, but there hasn't been enough hollering for us to stop. We report directly to the plant manager and do our own attendance and lateness sheets. We order our own material. Production control gives us orders 30 days in advance.

An engineer works directly with each group, sometimes providing information across shifts. One such engineer expressed enthusiasm for the arrangement, stating, "These people break their backs for you. This is beautiful; this is perfect; I've never worked anywhere like this."

Apparently, however, there is some variability in group relations with engineers, including some instances of sharp disagreement. In this sense, the increased worker autonomy can be thought of as elevating the importance of relations between engineers and workers. It thus poses a pivotal choice in which the outcome is either much deeper collaboration between workers and engineers or more contentious relations.

Although group members still tend to specialize in certain jobs, they note that they always make sure that at least two people know how to do each job to fill in for one another. This holds true for paperwork as well. According to group members, once people join, their attendance improves along with the quality of their work. One member explained:

> It's because the company gives us responsibility. When you're in the main subassembly area, you figure that if you build it wrong they'll be inspecting it. In our area, your number is on your ticket. There is no blaming anyone else but you. It used to be that you would get up in the morning and only think about having to go to a bench, but now you want to see your buddies. I look forward to days off as much as anyone, it's just that I also look forward to being in.

The groups often deal with vendors and sales representatives on their own. Most of the training of new members is on the job. At most, three hours may be spent initially to show a new member how the system works and the rest is learned over time.

In discussing relations with the union, group members indicated that they had first approached the union representatives at the same time that they initially approached the plant manager. It was particularly these union officials who urged that the groups be established on a voluntary basis. Still, there is some ambiguity in the situation since some of what the groups are doing does not precisely fit within the contract. For example, the employees in this area are technically working out of classification with respect to certain quality inspection and materials-handling activities. As a result, as one group member noted, "The floor union representatives are behind this. They back us behind the scenes, but they can't do it publicly."

Given their initial quasi-official status, it was critical for the groups to remain voluntary. That created tension, however, with the seniority-based system for job bumping and bidding. Job moves happen on approximately a quarterly basis, and as many as four of the six members of a group have been bumped in a single move. This turnover makes the record of continuous, high-quality performance all the more striking, though it does not make the job moves any more popular with the group members. Commenting on the impact of these job moves, one group member stated: "When you have a group, you all work together and socialize together. The promotions and transfers break that up. It's two steps forward and one back. This is the fourth full turnover in two years."

Within the past year, there have even been involuntary bumps into the autonomous work groups, with the consequent disruption of additional training and a greater degree of initial specialization. Former autonomous work group members who have been bumped into other areas have contributed to a diffusion of the general concept of semi-autonomous operations. Still, the overall experience raises an important institutional question — how to balance the seniority job rights of individuals with the continuity needs of groups.

In comparing this experience to that in facilities designed from the outset to be team-oriented, what is most striking is that the daily work operations are quite similar. However, two distinctions are notable. First, the tensions with the existing system of rules are more salient here (though these

issues do emerge over time to some extent in the team facilities). Second, the system is both more informal and more permeable. That is, there is greater informality in training and orientation (which may reflect generally high seniority and skill levels in the work force); and there is greater movement in and out of the teams (which is, of course, a product of the system of rules). Given the high levels of economic performance of these groups under these circumstances (informal training and extensive job movement), there is evidence to suggest that this mode of work organization is really quite robust.

Diffusion of Autonomous Work Practices

While the initial autonomous work groups emerged under unique circumstances, there are indications that they are at the forefront of a larger transformation in work organization at Xerox. A recent visit to the Webster Complex revealed that a number of new autonomous work groups had emerged of their own accord in various plants. Further, the idea of operating in this mode had been given explicit legitimacy under the BAWG structure and similar support in other Webster facilities.

An important test of the autonomous work group portion of the BAWG concept in the Components Manufacturing Operations occurred recently when Xerox offered an early retirement program for managers and other non-bargaining unit personnel. In about a half dozen cases, work groups whose supervisors took the early retirements have petitioned to operate on their own. Gradually, managers are evolving a set of questions to put to these groups to assess their readiness to operate in this mode, and preliminary indications are that groups will be established in most of these cases.

Further, across all the facilities in the Webster Complex, there are emerging increasing levels of complementary informal activities. Both managers and union officials indicated a wide range of work groups, formally under the responsibility of a supervisor, that have begun to operate more autonomously in one or more of the following activities: handling their own scheduling/assignments; monitoring their own inventory; meeting on their own with suppliers; maintaining their own records on quality; maintaining their own records on absenteeism; taking an active role in work redesign, especially around the introduction of new technology; and engaging in safety planning. Thus, in a quiet way, the very organization of work is undergoing a dramatic change.

Implications of Increased Work Group Autonomy

The developments represent a clear choice point for the parties. There is a natural opportunity to extend the participative structure. But as these flexible (and hence more varied) forms of work organization become more common, fundamental questions are raised. For many supervisors, these developments can be seen as direct threats to their employment security (despite assurances to the contrary) and as a threat to their authority. For union representatives — even those who are most supportive of these collaborative activities — there are concerns about maintaining equity in an environment of growing variation in work practices.

In part, the response of union leaders has been to develop informal criteria for when to allow variation and when not to. Basically it is a two-part test of 1) whether or not the new practice is likely to affect employees in other work areas, and 2) the extent to which management is or is not taking advantage of the situation. One union official commented that:

> The hardest part of all this is that we sometimes agree to do things that are different than the contract. Then you get variation. But we have to be competitive. This sort of policy is possible only so long as the company continues to see us as partners. In turn, we have to trust the company. When they say the house is burning inside, we have to trust them even if we can't see it. What George Meany and John L. Lewis did 30 or 40 years ago is not acceptable now.

These union leaders report that their job now involves more up-front research, rather than reactive contract enforcement.

Based on the increased prevalence of autonomous activities, the union brought a demand to the bargaining table in 1986 to institutionalize some of the activities. It proposed that a special classification be created for informal group leaders so that they get an additional pay premium and a dispensation to use 15 percent of their work time for administrative activities. As one shop chairman noted:

> Our intention was to see if management was going to really support these new activities or if they were just taking advantage of the members. The risk, of course, was that if they rejected the demand, we would have to tell the members to stop these informal activities.

In fact, despite the cost implications, this was an issue of some interest to higher management. As a result, an agreement was soon reached to create such a classification. Here we see shop-floor experiences giving rise to an issue that, although potentially contentious, was addressed in a way that actually reinforced the participative activities.

There is a similar double-edged potential arising out of autonomous work group relations with engineers. It is not yet clear what will be required to more systematically assure that the cooperative potential between engineers and work groups is realized. Also persisting as an unresolved area of tension is the balance between the importance of individual seniority rights and the importance of work group stability. Both the seniority and the engineering matters remain as potentially pivotal issues for the future.

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VIII. Linkage at a Strategic Level

For years, top ACTWU leaders (at the international level) had maintained an informal arrangement with Xerox chairmen and chief executive officers by which they would be updated on corporate strategic plans at least once a year. Corporate industrial relations staff also had direct and easy access to channel key issues for top-level consideration. Still, collective bargaining remained the central focus of the relationship.

During the early 1980s, top-level corporate restructuring suggested that a wide range of new human resource activities were viewed as at least as important as the traditional industrial relations functions. While these internal corporate issues were being sorted out, a fundamental question arose at the plant level in manufacturing concerning the role of the union in strategic management decision making. This was, of course, the decision to handle subcontracting issues on a collaborative basis through the use of the Study Team concept. Following this decision has come a succession of further degrees of union involvement in strategic decisions at the plant level.

Horizon Teams

In late 1983, the degree of union involvement in strategic human resource planning expanded considerably. In the manufacturing complex, an important response to heightened competition involved the creation of about a half-dozen Horizon Teams to explore the future of the reprographic business over the next decade. Although there was some union involvement on a number of the teams, it was particularly important that local ACTWU officials play a central role on the team responsible for scanning the future on human resource management issues. This new level of strategic activity was important, as well, because the 1983 contract included a no-layoff guarantee for ACTWU members in Webster. In the ensuing years, through team involvement and through separate planning sessions, the union has become a permanent partner in these critical forecasting activities.

Toner Plant Design and Construction

The centrality of the union in strategic planning was revealed in 1985, when it became clear that there was a need for the construction of a new plant for the manufacturing of toner, a black talc-like substance used in creating images in photocopiers. While the company's initial investigations suggested that a Southern U.S. location would be economically preferable (especially due to lower energy costs), the prior experience with the union on subcontracting issues and the ongoing joint discussions on human resource planning facilitated a union-management agreement to explore cost-effective ways to construct the new facility in Webster. A planning team was established with a majority of hourly members coming from the existing Toner Plant. With substantial changes in work organization, the use of new computer inventory and control equipment, reductions in the level of supervision, and other changes, it was demonstrated that the facility could be both cost effective and achieve superior quality levels. Ground was broken in the same year, and the new facility is now in operation.

Interviews with workers and managers who served on the plant-planning team revealed an experience comparable in some ways to the Study Teams. That is, there were initial difficulties in interfacing with organizational procedures. For example, reimbursement systems were not established to handle independent travel by hourly workers, yet this was a key part of the work of a number of team members. It was these sort of administrative difficulties and the amount of learning required for the task that were identified by team members as the greatest barriers to their functioning effectively. While these barriers are not to be taken lightly, it is significant that the group did not encounter the same degree of overt resistance experienced by the first Study Team.

Product Development

In the fall of 1982, Xerox announced its new "10 series of Marathon copiers," which included the mid-size 1075 machine that has since led the way in recapturing market share for the corporation. There is pride throughout the corporation in this set of third-generation machines. ACTWU even requested that a union label be put on each machine, which has occurred. For the corporation, however, there was no room for complacency. In the development of the newest machines, there have been yet further advances in the way ACTWU and Xerox have been working together.

For past products, hourly workers would only see the new machines during trial production runs late in their development. Now, however, a team of hourly workers has been assigned full-time to work with the engineers in the early stages of product development for the newest Xerox copier — especially around manufacturability issues. Special flexibility has been allowed for in terms of hourly workers' classifications. Similar parallel product development occurred across different elements of the engineering process that had formerly proceeded linearly. The net result of this experience, according to a senior engineer associated with the project, is that almost a year has been cut off the time that would have otherwise been required for the development of the new product. Interviews with some of the workers associated with this project confirm that numerous potential production problems have been found and solved at far earlier stages than would normally be the case.

Supplier Relations

The latest development at the strategic level concerns supplier relations. This represents a natural step for the company, but a mixed set of issues from the union's perspective. In recent years, Xerox has reduced the number of parts vendors with whom it deals from 5,000 to 400. It has sought just-in-time delivery arrangements and quality

standards that approach zero defects. Indeed, in 1985 it earned *Purchasing* magazine's Medal of Excellence after reducing its parts inventory levels by $240 million and automating its parts warehouses.[15] These developments are highly visible in Xerox's Components Manufacturing Operations, where hundreds of square feet formerly allocated to storage is now being reclaimed for production.[16]

[15]Jacobson and Hillkirk, *op. cit.*

[16]Specifically, the area is now being used for the development of a world-class injection-mold plastics capability. The technology for injection-molded panels and parts continues to advance and replace metal, prompting Xerox to hire a leading engineering expert in this area and to make the extensive investment in capital and training associated with developing this capacity.

IX. Transformation of the Management Organization

Based in part on the successful experiences in the manufacturing organization (and in part on lessons from other organizations), the current chairman and chief executive officer of Xerox, David Kearns, embarked in 1984 on an effort to transform the way the entire management structure operates. Termed "Leadership Through Quality" (LTQ), the initiative began with a meeting of Kearns with the senior executives who report directly to him. Treating each other as "customers" for their respective output, they sought to define standards for quality performance and to establish regular meetings or other mechanisms for meeting these customer requirements. In turn, these senior executives met with their direct reports to engage in the same exchange of requirements and plant plans for meeting these requirements. Preceding each of these sessions, the individuals were given training in communications skills, decision-making skills and various LTQ principles. Following the same format as these top-level sessions, this interactive process has continued, as one individual put it, "cascading down the organization." In a sense, this process puts in place a system of continuous two-way negotiations that has the potential to allow for high degrees of adaptability throughout the management structure.

When the training of senior managers in the manufacturing portion of Xerox began, however, a source of tension emerged. It was clear that senior union officials were among the main "customers" for the senior manufacturing managers, but the LTQ plan did not contemplate union participation. Indeed, there were some in the union who feared that management was seeking to create a strategic alternative to QWL that did not depend on joint governance. A specific concern of the union was its wanting to preserve its say in the sort of training that would be received by its members. Further, the LTQ team of trainers was using techniques and materials similar in many ways to those used by the union and management QWL facilitators, raising an issue as to who would provide this training. The first critical development to emerge out of this tension was the establishment of a Core Committee with top union leaders, top managers, LTQ trainers, and QWL coordinators. The main task confronting this committee was this bundle of integration issues.

It was decided that LTQ would occur in manufacturing, but in a modified form. The first session included not only top managers, but also top union leaders (a significant event) and the QWL coordinators. These QWL coordinators along with the LTQ trainers jointly delivered the subsequent sessions as they "cascaded" down the manufacturing side of the organization. As well, the content of the LTQ process was modified to fit a unionized setting. Today, every single manager and union official in manufacturing has been through the three days of LTQ training, and almost every union member has been through the same sessions subsequently with their respective managers.

One of the key limitations of the QWL process, which has persisted in part into the BAWG structure, concerns the responsiveness of the management organization to these participative efforts. One potential advantage of LTQ, however, is that it more explicitly develops a common managerial language for how to think about the role of managers. This may at least temper some of the negative consequences of managerial rotation and turnover.

While it is not possible here to assess fully the impact of LTQ, it is clearly a step in the direction of building a necessary, complementary adaptive capacity among managers. Preliminary evidence of a positive impact is suggested by a look at the quality performance in the New Build Organization. During the period of the early QWL efforts (from 1982 to 1984), reject rates declined by about half. During the next two years (during the implementation of LTQ), the rate of improvement increased by a factor of seven. While many factors contributed to the improvement, the organizational changes are clearly concurrent and probably major contributors. Like so many other developments in this relationship, the experience with LTQ also illustrates how even an ostensibly collaborative change brings potentially contentious issues that must be addressed, if it is to proceed.

While the amount of inventory and storage work has been reduced, and the number of quality control inspectors has declined, management has been aggressive in bringing new production work into CMO. This is, at least partly, a result of the no-layoff guarantee. A strategic decision by the corporation to centralize even more of its manufacturing operations in the Rochester area has also assured a steady flow of work for the employees in Local 14A. However, it is with respect to the changes in relations with external suppliers that there are emerging some troubling issues from the union's point of view. Lately, for example, Xerox has begun to explore sharing the skills of its engineers, organizational effectiveness specialists (the new title for individuals who were formerly QWL facilitators), and internal consultants with its suppliers. For the union, this raises fears that its own members will be helping to reduce the pool of work that might be brought into the Webster complex. It is too soon to tell how the issue will be resolved, but it illustrates the continuing, iterative nature of this transformation process. For each triumph in collaboration, there emerges yet another potentially contentious issues that is double-edged. If the issue is addressed to the satisfaction of all the stakeholders, it does not hold back cooperation and may reinforce such efforts. If it is not addressed, it threatens all prior collaborative achievements.

One event has not occurred at the strategic level. This is a choice by the ACTWU leadership to decline management offers of formal membership on the management operations committee for manufacturing. Despite the union's many other forms of involvement, the decision reflects a concern that this formal role could too tightly link the union to

managerial decisions that it might have to turn around and oppose. While local union leaders feel it is appropriate to be involved in the discussion of key strategic issues at the earliest possible times, they want to do so in a way that preserves their independence.[17]

[17]This issue — a central concern of union leaders as they enter new collaborative relations — is developed more fully in a companion research study conducted by M.I.T. for the U.S. Department of Labor. This study is entitled: "The Changing Role of Union Leaders."

X. Continuity in the 1986 Negotiations

While the 1983 negotiations marked a significant integration of the collaborative effort with the traditional rule-oriented aspects of the relationship, the key question in the minds of union members, union leaders, and union managers was whether the 1986 negotiations would continue along that path. Five potentially contentious questions threatened to disrupt such continuity. First, the original QWL program had been established with a mission statement that included broad language concerning a sharing of the benefits of cooperative efforts. Increasingly, there was pressure from the shop floor to make a sharing of the gains explicit and more substantive than the existing corporate-wide profit-sharing program (which was quite distant in its relation to the performance of work areas), the suggestions program, and the contest-gift program. Second, there was a real concern as to whether the no-layoff guarantee would continue. Third, the company was feeling pressure to move compensation in a direction that would promote the firm's competitive position. Fourth, the issue of a new classification for leaders of groups taking on more autonomous responsibilities was on the table. Finally, the union could not leave the negotiations without some formal change in the absenteeism control program.

In fact, the parties succeeded in tackling all of these issues. They agreed to extend the no-layoff policy another three years, which is now seen by many workers as a key foundation to the cooperative efforts. A pilot study of new forms of rewards and recognition was also begun as a result of the agreement, and the absenteeism control program was modified to be less restrictive regarding events beyond an employee's control. As was noted earlier, a settlement was also reached on the new classification for group leaders. Finally, a wage package was assembled that included a lump sum payment of $2,000 in the first year and a lump sum 6 percent payment in the following year. It was felt that this would be seen as an attractive increase by the employees, but also keeping the increase out of the base would enhance Xerox's ability to bid on new business. Apparently the parties read the union membership correctly. The agreement was approved by over a three-to-one margin, one of the strongest ratification votes ever.

Not only did the substance of the agreement further attend to the joint needs of the parties, but the process of the bargaining was itself distinctive. At a number of times during the negotiations, joint study groups were established to explore various issues. At the main table, there were two brainstorming sessions. This occurred, for example, around the design of a modified absenteeism control program. This shift in the tone at the table reflects a transformation that is gradually occurring more generally in the handling of conflict between labor and management.

It is also at the shop floor that supervisors, labor relations professionals, and union representatives (in at least some areas) report increasing degrees of problem solving around contentious issues. This is true in the tolerance for variation in work practices, but can also be seen in the records of one labor relations professional who made an explicit attempt over the last year to solve conflicts prior to their being logged as grievances. Over three times as many disputes were resolved before being logged in, resulting in more grievances being settled at earlier stages and in an overall decline in the number of grievances.

Just as the nature of participation gradually evolved to be integrated with the union and management organizations, it is clear that the traditional activities of collective bargaining and contract enforcement have evolved to more closely complement the collaborative efforts. The 1983 language on Study Teams and job security, as well as the 1986 language on group leaders, suggests that collective bargaining can be a powerful institutionalizing force. Further, while conflicts are increasingly being resolved through comparatively subtle exercises of power and more explicit problem solving, the grievance procedure and the contract still provide a valuable anchor to the dispute resolution.

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XI. Conclusions

Today, Xerox continues to dominate the copier industry.[18] Moreover, with product, manufacturing, and sales innovations it has managed to regain market share (from 20 percent to over 35 percent) in the critical market for mid-volume copiers. With the aid of Fuji Xerox it has managed to maintain a presence in the low-volume portion of the market. And, it has held onto a full 75 percent of the market share for high-volume copiers. Many elements of the organization have been critical in this turnaround. In this case, we have examined the complex dynamics associated with this change in the manufacturing portion of the business.

Social and Performance Outcomes

Assessing the relationship between the changing patterns of labor-management relations and various "outcome" measures is highly complex. While a separate analysis is currently underway around these issues, it is possible to report some overall trends along performance and social dimensions. The steady improvements along many of these dimensions do not demonstrate causality. However, they are at least suggestive that the impact is in a positive direction.

Quality improvements in the New Build Operations were mentioned earlier, in the discussion of the impact of the Leadership Through Quality effort. Additional information on quality and other factors is available on the Components Manufacturing Operations. For example, during the period from 1981 to 1985, there was a steady improvement in quality (based on lots accepted and line fallout) from 89.3 percent to 99.1 percent. There was a parallel improvement in "on-time" shipment of parts from 87.0 percent in 1981 to 100 percent in 1985. During the same period of time, the months of supply of finished goods on hand has been reduced by more than 100 percent. In other words, the organization is more lean in the way it operates, yet it is better at meeting the needs of its internal and external customers.

In terms of social outcomes, the period dating from 1981 saw a decline in the ratio of salaried to direct labor by 18 percent and a decline in the ratio of indirect to direct labor of about 23 percent. Both of these measures are reflective of the increased levels of shop-floor autonomy. Grievances declined slightly from 4.6 per 100 union employees in 1981 to 3.02 per 100 union employees in 1985, though the number of grievances did fluctuate during this period (with a high of 6.2 in 1982 — during the layoffs and preceding the 1983 negotiations). In recent local union elections nearly all of the union stewards in the Webster complex have been returned to office and the most recent collective bargaining contract received one of its strongest ratification votes ever. Attendance, as was noted earlier, improved from 92.0 percent in 1981 to 97.3 percent in 1985.

The combined set of social and performance indicators suggest that, in general, the interests of the employees, the union, and the firm are indeed all being met. As we saw in the case, this is not to say that there have not been important conflicts within and across these collectivities; nor is it to say there will not continue to be conflicts in the future. Rather, it suggests that it is possible to have such conflicts and still achieve joint gains.

In Summary

Like so many organizations and unions, Xerox and the ACTWU sought to foster employee involvement as a distinct concept — separate from the internal operations of the company and the union and independent of collective bargaining. Over time, a series of potentially contentious issues have emerged, ranging from layoffs to outsourcing decisions to unpopular contractual change to a corporate-wide management change effort. In these and other cases, the issues proved double-edged. Where they were incompletely addressed, they served to undermine collaborative activities. Where the conflicts were resolved, however, they did not impede and often reinforced the collaboration.

Concurrently, the nature of the participatory effort has evolved considerably — reflecting a diversity of preferences about participation that became salient as it became more directly integrated into the management organization, the union organization, and informal shop-floor relations. The result has been a more flexible set of institutional arrangements. As well, there are evolving a set of norms and rules to ensure that equity and institutional security are not sacrificed in the name of increased flexibility. This is evident in the norms for when to allow variation in work practices and in the norms regarding the legitimacy of union input into top-level resource allocation decisions.

Finally, what is most striking about this case is that it reveals just how difficult and yet how important it is for the parties in an employment relationship to develop an adaptive learning capacity. That is, the parties have frequently been able to recognize pivotal events as just that — opportunities for reflection and choice. It is out of such reflection, for example, that a core employee interest (such as a concern about job security) is distinguished from a particular manifestation of that concern (such as highly specialized work rules) and an alternative institutional response becomes possible (such as the no-layoff guarantee). The key to the success of Xerox and ACTWU is not any one innovation. It is not QWL, Study Teams, BAWGs, autonomous work groups, Horizon Teams, new forms of product development or plant design, Leadership Through Quality, or any of the other developments documented in this case. Rather, it has been the ability to learn when (and how) to develop these new institutional arrangements that is the key.

The early history of concern for employees at Xerox and the tradition in ACTWU of attention to the competitive situation of employers have both facilitated the initiative discussed in this case. It helped, too, that this local was

[18] Ranked by copier revenues. Xerox (at $8.9 billion in 1985) is still many times the size of its closest rivals, which are Canon (at $2.2 billion), Ricoh (at $1.9 billion), Kodak (at $0.9 billion), and IBM (at $0.7 billion).

sufficiently independent of other ACTWU locals that it could innovate without producing tension across the international union. The very existence of a union, in this case, also proved critical in sustaining and diffusing many of the innovations — particularly when there was managerial turnover.

In all, the experience of Xerox and ACTWU suggests that the institutionalization of innovation in employment relations depends, first, on recognizing that employment relations contain a mixture of common and conflicting interests. The importance of identifying and pursuing common concerns is revealed as intimately intertwined with the importance of identifying and resolving conflicts. Further, the case suggests that attending to this interrelationship does not happen all at once. Rather, it is a continuous process punctuated by a succession of pivotal events that demand reflection, and, occasionally, the redesign of institutional arrangements. It is no wonder that it is difficult, but it is important to know that it is possible.

XII. Timeline

1980 **QWL language in collective bargaining agreement.**

Four-point Plant Advisory Committees and departmental steering committees established to create and support employee problem-solving groups.

1981

1983

1984 **Operating engineers union withdraws from QWL in protest over medical benefit change issues.**

QWL groups decline in New Build Operations, informal pre-shift meetings emerge in their place.

1987

Appendix: Questions for Discussion

The following questions, developed by staff of the Bureau, are designed to facilitate discussion of some of the key issues raised in this case study. In addition to knowing what happened at Xerox, the Bureau believes these questions will help readers understand why things happened as they did and highlight [illegible]

1. [illegible]

- [illegible]

- What are the [illegible] beginning collaborative [illegible] employee involvement [illegible]
- What conditions would [illegible] that such a program [illegible] management relationship
- What would happen if the [illegible] management and union leadership [illegible] collaborative process with the goal of [illegible] relationship? What might the resultant process look like?

2. Reflecting on the experience of the Study Teams charged with developing alternatives to anticipated subcontracting, the author (on page 8) makes this observation:

> The experience with the Study Teams reveals that, in order for this collaboration to effectively contribute to the goals of the employees and the employer, it was preceded, first, by a conflict that could not be resolved without some degree of hard bargaining.

- Is conflict a prerequisite to engagement [illegible] achieving mutual [illegible]
- [illegible]
- So

3. Ref[illegible] the more [illegible]

(BAWG) structure, the author (on page 13) makes this comment:

> First, without the change in structure, it is likely that the QWL effort would not have progressed substantially beyond its plateau.

- [illegible] organizational

- [illegible]

[illegible] suggests that [illegible] benefits can be seen as [illegible] their employment security (despite [illegible] assurances to the contrary) and a threat to their authority. For the union representatives – even those who are most supportive of these collaborative activities – there are [illegible] about maintaining equity in an environment of [illegible] in work practices.

- How should an organization respond to supervisors' [illegible] that they will be losing their jobs with the advent of autonomous work teams?
- Is the emergence of autonomous work teams a real or imagined threat to a supervisor's authority? How is the role of a supervisor likely to change?
- Why should the emergence of autonomous work teams raise concerns about maintaining equity for both labor and management? How should these concerns be addressed?

5. In his conclusion (on page 24) the author makes the following observation regarding the union:

> The very existence of a union, in this case, also proved critical in overcoming [illegible] many of the [illegible] management.

- [illegible]

[illegible] abused?

- [illegible] participates [illegible] doing?

[illegible] GOVERNMENT PRINTING OFFICE: 1988 [illegible]